

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming a protrusion on a semiconductor substrate having a first area and a second area surrounding the first area, the protrusion protruding above the first area;

disposing a support on a surface of the semiconductor substrate on which the protrusion is formed so that a through hole of the support overlaps with the first area, at least one protrusion is set in an opening of the through hole, a part of the support overlapping with the second area being thicker than another part of the support overlapping with the first area; and

grinding the semiconductor substrate from a surface opposite to the surface on which the protrusion is formed.

2. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

disposing a resin layer on a first area of a semiconductor substrate, the semiconductor substrate having a second area surrounding the first area;

disposing a support on a surface of the semiconductor substrate on which the resin layer is disposed so that a through hole of the support overlaps with the first area, at least a protrusion on the resin layer is set in an opening of the through hole, a part of the support overlapping with the second area being thicker than another part of the support overlapping with the first area; and

grinding the semiconductor substrate from a surface opposite to the surface on which the resin layer is disposed.

3. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

disposing a resin layer on a first area of a semiconductor substrate, the semiconductor substrate having a second area surrounding the first area;

disposing a protruding electrode on the resin layer;

disposing a support on a surface of the semiconductor substrate on which the resin layer is disposed so that a through hole of the support overlaps with the first area, at least the protruding electrode is set in an opening of the through hole, a part of the support overlapping with the second area being thicker than another part of the support overlapping with the first area; and

grinding the semiconductor substrate from a surface opposite to the surface on which the resin layer is disposed.

4. (Previously Presented) The method of manufacturing a semiconductor device according to claim 1, the second area being an outer end of the semiconductor substrate.

5. (Previously Presented) The method of manufacturing a semiconductor device according to claim 1, the step of disposing the support including forming the support by coating the semiconductor substrate with resin by spin-coating.

6. (Previously Presented) The method of manufacturing a semiconductor device according to claim 5, the step of disposing the support including forming a raised portion of the resin on the second area.

7. (Previously Presented) The method of manufacturing a semiconductor device according to claim 5, the step of disposing the support including pressing to planarize a surface of the resin.

8. (Previously Presented) The method of manufacturing a semiconductor device according to claim 1, the support including an adhesive sheet having an adhesive layer thicker than the height of the protrusion; and

the step of disposing the support including forming the support by pressing the semiconductor substrate against the adhesive sheet to eject at least a part of the adhesive layer outside the protrusion.

9. (Previously Presented) The method of manufacturing a semiconductor device according to claim 2, the support including an adhesive sheet having an adhesive layer thicker than the thickness of the resin layer; and

the step of disposing the support further including forming the support by pressing the semiconductor substrate against the adhesive sheet to eject at least a part of the adhesive layer outside the resin layer.

10. (Previously Presented) The method of manufacturing a semiconductor device according to claim 3, the support including an adhesive sheet having an adhesive layer thicker than the total thickness of the resin layer and the protruding electrode; and

the step of disposing the support including forming the support by pressing the semiconductor substrate against the adhesive sheet to eject at least a part of the adhesive layer outside the resin layer and the protruding electrode.

11. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

forming a protrusion on a semiconductor substrate having a first area and a second area surrounding the first area, the protrusion protruding above the first area;

disposing a support on a surface of the semiconductor substrate on which the protrusion is formed, so that a through hole of the support overlaps with the first area and the protrusion is set in an opening of the through hole; and

grinding the semiconductor substrate from a surface opposite to the surface on which the protrusion is formed.

12. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

disposing a resin layer on a first area of a semiconductor substrate, the semiconductor substrate having a second area surrounding the first area;

disposing a support on a surface of the semiconductor substrate on which the resin layer is disposed, so that a through hole of the support overlaps with the first area and at least a protrusion on the resin layer is set in an opening of the through hole; and

grinding the semiconductor substrate from a surface opposite to the surface on which the resin layer is disposed.

13. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

disposing a resin layer on a first area of a semiconductor substrate, the semiconductor substrate having a second area surrounding the first area;

disposing a protruding electrode on the resin layer;

disposing a support on a surface of the semiconductor substrate on which the resin layer is disposed, so that a through hole of the support overlaps with the first area, at least one protruding electrode is set in an opening of the through hole; and

grinding the semiconductor substrate from a surface opposite to the surface on which the resin layer is disposed.

14. (Previously Presented) The method of manufacturing a semiconductor device according to claim 11, the second area being an outer end of the semiconductor substrate.

15. (Previously Presented) The method of manufacturing a semiconductor device according to claim 14, the support being formed on the periphery of the through hole and has a step that disposes an outer end of the semiconductor substrate.

16. (Previously Presented) The method of manufacturing a semiconductor device according to claim 11, the support being made of resin.

17. (Previously Presented) The method of manufacturing a semiconductor device according to claim 16, the step of disposing the support including curing the resin.

18. (Previously Presented) The method of manufacturing a semiconductor device according to claim 1, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

19. (Previously Presented) The method of manufacturing a semiconductor device according to claim 1, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

20. (Previously Presented) The method of manufacturing a semiconductor device according to claim 1, further comprising:

removing the support from the semiconductor substrate after the step of grinding the semiconductor substrate.

21. (Currently Amended) A method of manufacturing a semiconductor device, comprising:

disposing a resin layer on a first and a second areas of a semiconductor substrate, the first area becoming a product and the second area surrounding the first area not becoming a product;

disposing a protruding electrode on the resin layer and above the first and the second areas; and

disposing a support on a surface of the semiconductor substrate so that a through hole of the support overlaps with the first area of the semiconductor substrate and the protruding electrode is set in an opening of the through hole,

grinding the semiconductor substrate from a surface opposite to the surface on which the resin layer is disposed.

22. (Previously Presented) The method of manufacturing a semiconductor device according to claim 21, the second area including an area of a part which includes a side face of the semiconductor substrate and becomes a semiconductor chip.

23. (Previously Presented) A semiconductor device manufactured by the method according to claim 1.

24. (Original) A circuit board equipped with the semiconductor device according to claim 23.

25. (Original) An electronic apparatus comprising the semiconductor device according to claim 23.

26. (Previously Presented) The method of manufacturing a semiconductor device according to claim 2, the second area being an outer end of the semiconductor substrate.

27. (Previously Presented) The method of manufacturing a semiconductor device according to claim 3, the second area being an outer end of the semiconductor substrate.

28. (Previously Presented) The method of manufacturing a semiconductor device according to claim 2, the step of disposing the support including forming the support by coating the semiconductor substrate with resin by spin-coating.

29. (Previously Presented) The method of manufacturing a semiconductor device according to claim 3, the step of disposing the support including forming the support by coating the semiconductor substrate with resin by spin-coating.

30. (Previously Presented) The method of manufacturing a semiconductor device according to claim 28, the step of disposing the support including forming a raised portion of the resin on the second area.

31. (Previously Presented) The method of manufacturing a semiconductor device according to claim 29, the step of disposing the support including forming a raised portion of the resin on the second area.

32. (Previously Presented) The method of manufacturing a semiconductor device according to claim 28, the step of disposing the support including pressing to planarize a surface of the resin.

33. (Previously Presented) The method of manufacturing a semiconductor device according to claim 29, the step of disposing the support including pressing to planarize a surface of the resin.

34. (Previously Presented) The method of manufacturing a semiconductor device according to claim 2, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

35. (Previously Presented) The method of manufacturing a semiconductor device according to claim 3, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

36. (Previously Presented) The method of manufacturing a semiconductor device according to claim 2, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

37. (Previously Presented) The method of manufacturing a semiconductor device according to claim 3, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

38. (Previously Presented) The method of manufacturing a semiconductor device according to claim 11, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

39. (Previously Presented) The method of manufacturing a semiconductor device according to claim 11, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

40. (Previously Presented) The method of manufacturing a semiconductor device according to claim 12, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

41. (Previously Presented) The method of manufacturing a semiconductor device according to claim 12, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

42. (Previously Presented) The method of manufacturing a semiconductor device according to claim 13, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

43. (Previously Presented) The method of manufacturing a semiconductor device according to claim 13, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

44. (Previously Presented) The method of manufacturing a semiconductor device according to claim 12, the support being made of resin.

45. (Previously Presented) The method of manufacturing a semiconductor device according to claim 44, the step of disposing the support including curing the resin.

46. (Previously Presented) The method of manufacturing a semiconductor device according to claim 13, the support being made of resin.

47. (Previously Presented) The method of manufacturing a semiconductor device according to claim 46, the step of disposing the support including curing the resin.

48. (Previously Presented) The method of manufacturing a semiconductor device according to claim 2, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

49. (Previously Presented) The method of manufacturing a semiconductor device according to claim 3, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

50. (Previously Presented) The method of manufacturing a semiconductor device according to claim 11, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

51. (Previously Presented) The method of manufacturing a semiconductor device according to claim 12, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

52. (Previously Presented) The method of manufacturing a semiconductor device according to claim 13, the first area being an area of an effective chip having an integrated circuit and becoming a product; and

the second area being an area of a periphery chip which does not become a product.

53. (Previously Presented) The method of manufacturing a semiconductor device according to claim 2, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

54. (Previously Presented) The method of manufacturing a semiconductor device according to claim 3, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

55. (Previously Presented) The method of manufacturing a semiconductor device according to claim 11, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

56. (Previously Presented) The method of manufacturing a semiconductor device according to claim 12, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

57. (Previously Presented) The method of manufacturing a semiconductor device according to claim 13, further comprising:

cutting the semiconductor substrate with the support disposed on the semiconductor substrate after the step of grinding the semiconductor substrate.

58.-59. (Canceled)